

Unit	Code	6-Sep kWh**	8-Sep kWh	11-Sep kWh	18-Sep kWh	28-Sep kWh	10-Oct kWh	2-Nov kWh	7-Nov kWh	15-Nov kWh	2-Nov 23 days	7-Nov 5 days	15-Nov 8.2 days			
6393PL	3bd-5	4130	4189	4294	4459	4682	5021	5560	5708	5947	539	23.4	148	29.6	239	29.1
6397PL	3bd-6	3878	3934	4009	4150	4323	4556	4948	5046	5218	392	17	98	19.6	172	21.0
6379PL	3bd-3	3626	3684	3785	3923	4139	4405	4812	5021	5187	407	17.7	209	41.8	166	20.2
6395PL	2bd-5	3336	3382	3460	3586	3769	4007	4584	4626	4835	577	25.1	42	8.4	209	25.5
6391PL	2bd-4	3227	3265	3342	3443	3587	3786	4211	4340	4560	425	18.5	129	25.8	220	26.8
6380PL	2bd-1	2578	2621	2690	2791	2960	3161	3504	3607	3764	343	14.9	103	20.6	157	19.1
6399PL	2bd-6	2393	2416	2474	2575	2718	2887	3232	3351	3495	345	15	119	23.8	144	17.6
6389PL	3bd-4	2256	2279	2308	2355	2432	2525	2701	2742	2833	176	7.7	41	8.2	91	11.1
6381PL	2bd-3	2207	2214	2246	2303	2383	2513	2754	2833	2951	241	10.5	79	15.8	118	14.4
6378PL	3bd-2	1875	1910	1978	2089	2255	2518	3068	3307	3652	550	23.9	239	47.8	345	42.1
6376PL	3bd-1	1710	1732	1791	1863	1999	2218	2632	2751	2933	414	18	119	23.8	182	22.2
6382PL	2bd-2	1631	1661	1705	1800	1926	2134	2533	2684	2832	399	17.3	151	30.2	178	21.7

****Sequence listed is high to low meter readings as of September 6, 2012**

Chart #1 data (above)

Chart #1 next page (2)

Meter readings required to set baselines for future comparisons

Chart #2 (same data) on

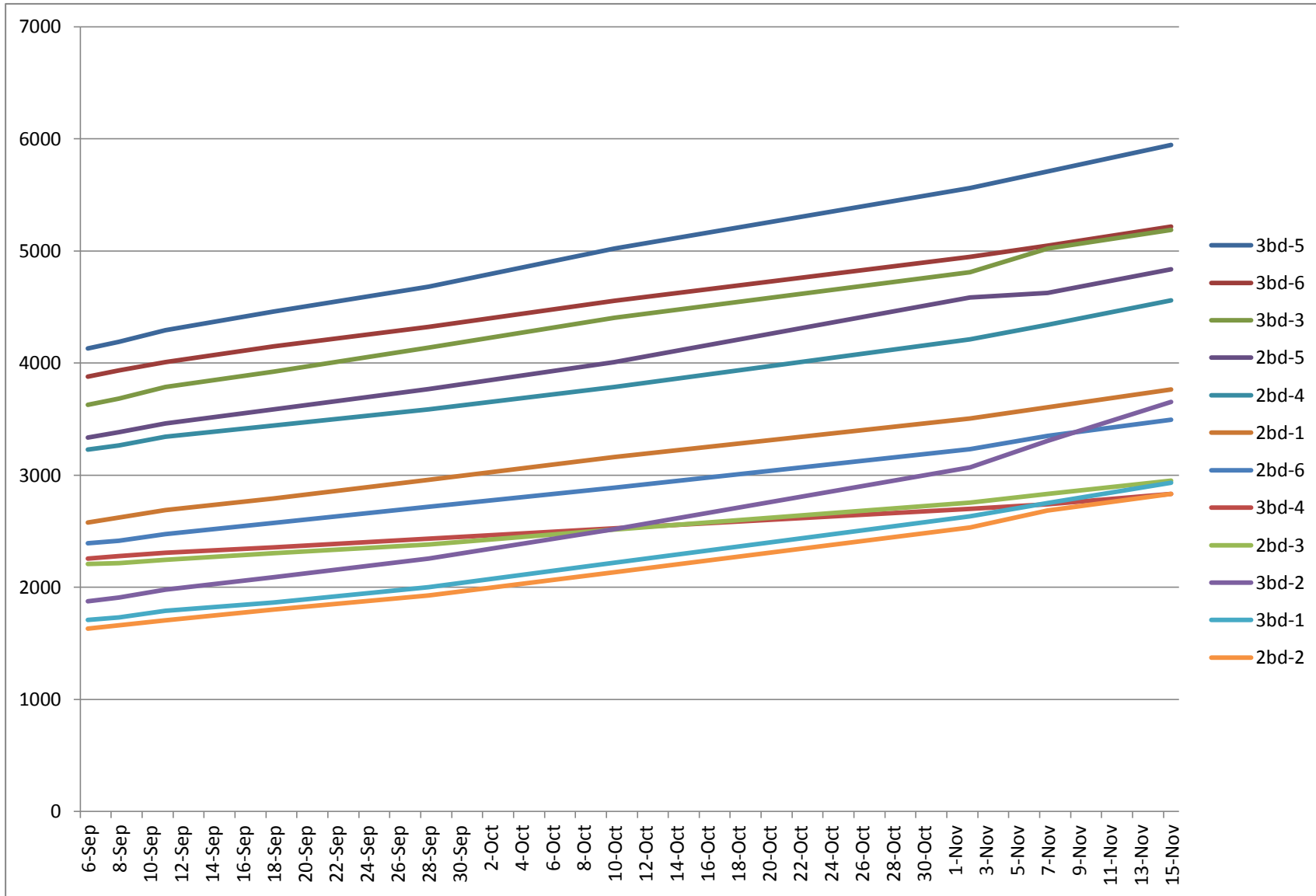
CASE Study: Piedmont Lane (PL), The Plains, VA

**** Descending sequence of meter kWh readings as date research commenced on 9/6/12**

Lines will intersect with the passage of time as energy usage varies by unit / occupants habits / equipment / outside temperatures / humidity / weather / vacations

NO occupant visibility to usage except for their own via utility bills prior to any of this data being distributed - awareness / education could lead to lower utility bills

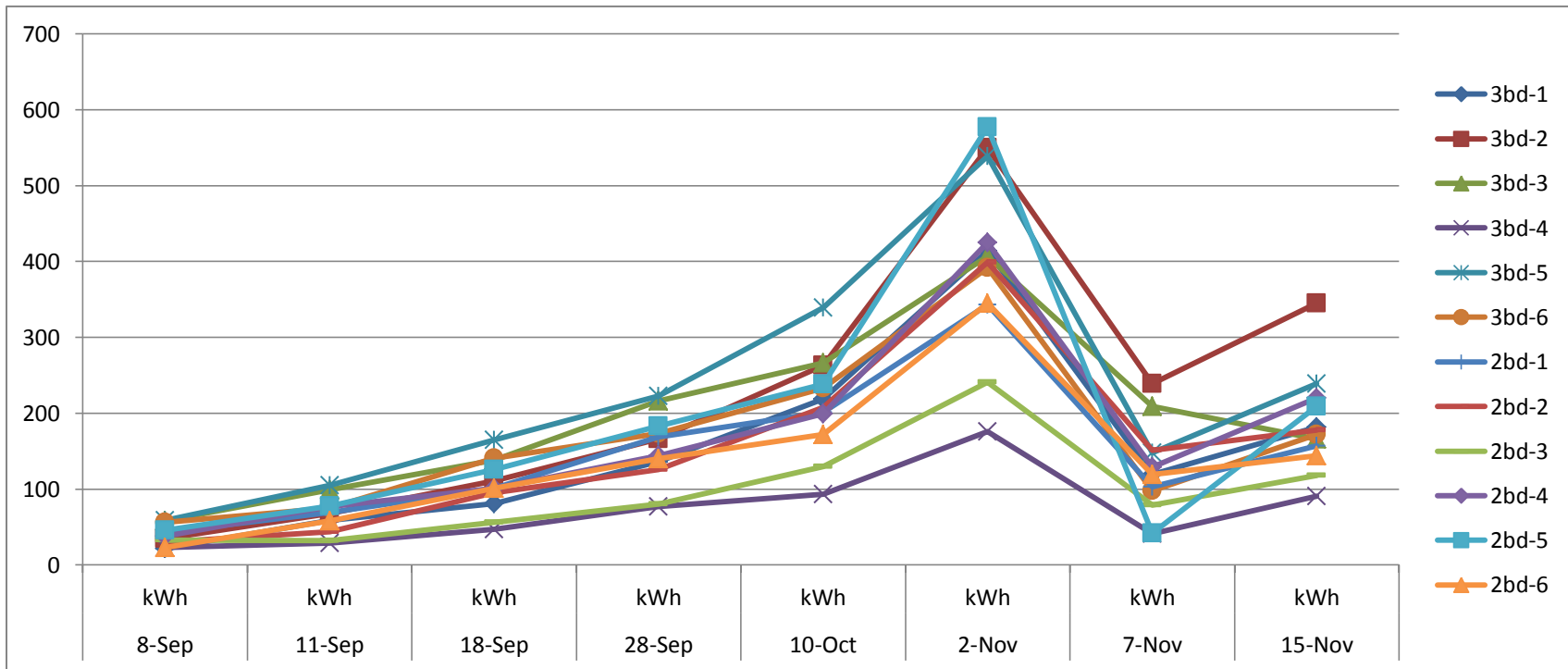
Chart #1 Meter readings: First occupants in May 2012 and all 12 units filled by 8/31/12 - Baselines / usage different due to construction processes / metrics / timing, geothermal unit testing, # of occupants, habits, comfort levels, etc. Chart #1 is the simplest format to show kWh usage as time passes. Key metric: Rate of



Results "blinded" on some graphs for privacy reasons. 3 bedroom units all equal size as are the 2 bedroom units
Unit #s available on request by occupants, management company, foundation, architects, builder, etc.
Observation #1: Larger units (square footahe) do not necessarily use more power (kWh) - all 2 story

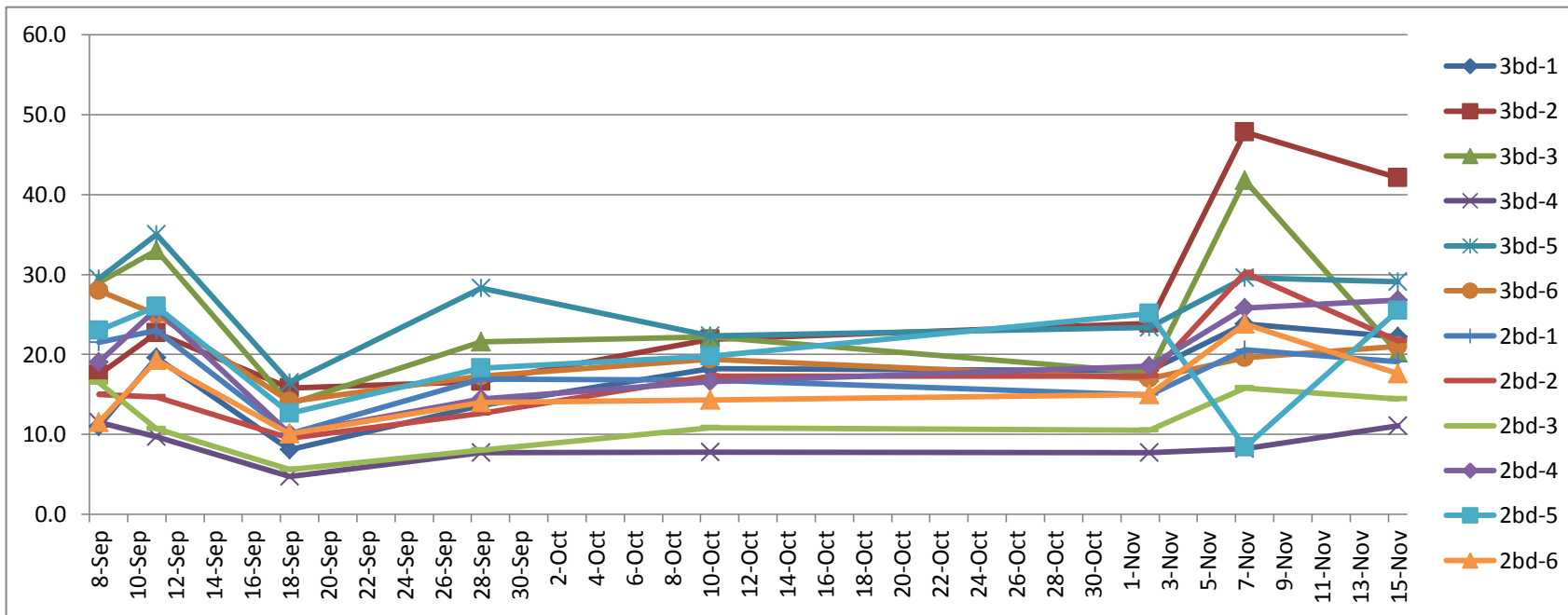
Unit #	Code	8-Sep	11-Sep	18-Sep	28-Sep	10-Oct	2-Nov	7-Nov	15-Nov
		kWh	kWh	kWh	kWh	kWh	kWh	kWh	kWh
6376PL	3bd-1	22	59	81	136	219	414	119	182
6378PL	3bd-2	35	68	111	166	263	550	239	345
6379PL	3bd-3	58	99	138	216	266	407	209	166
6389PL	3bd-4	23	29	47	77	93	176	41	91
6393PL	3bd-5	59	105	165	223	339	539	148	239
6397PL	3bd-6	56	75	141	173	233	392	98	172
6380PL	2bd-1	43	69	101	169	201	343	103	157
6382PL	2bd-2	30	44	95	126	208	399	151	178
6381PL	2bd-3	33	32	56	80	130	241	79	118
6391PL	2bd-4	38	77	101	144	199	425	129	220
6395PL	2bd-5	46	78	126	183	238	577	42	209
6399PL	2bd-6	23	58	101	140	172	345	119	144

		2-Nov	7-Nov	15-Nov
		23 days	5 days	8.2days
6393PL	3bd-5	539	148	239
6397PL	3bd-6	392	98	172
6379PL	3bd-3	407	209	166
6395PL	2bd-5	577	42	209
6391PL	2bd-4	425	129	220
6380PL	2bd-1	343	103	157
6399PL	2bd-6	345	119	144
6389PL	3bd-4	176	41	91
6381PL	2bd-3	241	79	118
6378PL	3bd-2	550	239	345
6376PL	3bd-1	414	119	182
6382PL	2bd-2	399	151	178



Unit	Code	8-Sep	11-Sep	18-Sep	28-Sep	10-Oct	2-Nov	7-Nov	15-Nov
		kWh/day	Wh/day	Wh/day	Wh/day	kWh/day	Wh/day	Wh/day	Wh/day
6376PL	3bd-1	11.0	19.6	8.1	13.6	18.3	18.0	23.8	22.2
6378PL	3bd-2	17.5	22.7	15.8	16.6	21.9	23.9	47.8	42.1
6379PL	3bd-3	29.0	33.0	13.8	21.6	22.2	17.7	41.8	20.2
6389PL	3bd-4	11.5	9.7	4.7	7.7	7.8	7.7	8.2	11.1
6393PL	3bd-5	29.5	35.0	16.5	28.3	22.3	23.4	29.6	29.1
6397PL	3bd-6	28.0	25.0	14.1	17.3	19.4	17.0	19.6	21.0
6380PL	2bd-1	21.5	23.0	10.1	16.9	16.8	14.9	20.6	19.1
6382PL	2bd-2	15.0	14.7	9.5	12.6	17.3	17.3	30.2	21.7
6381PL	2bd-3	16.5	10.7	5.6	8.0	10.8	10.5	15.8	14.4
6391PL	2bd-4	19.0	25.7	10.1	14.4	16.6	18.5	25.8	26.8
6395PL	2bd-5	23.0	26.0	12.6	18.3	19.8	25.1	8.4	25.5
6399PL	2bd-6	11.5	19.3	10.1	14.0	14.3	15.0	23.8	17.6

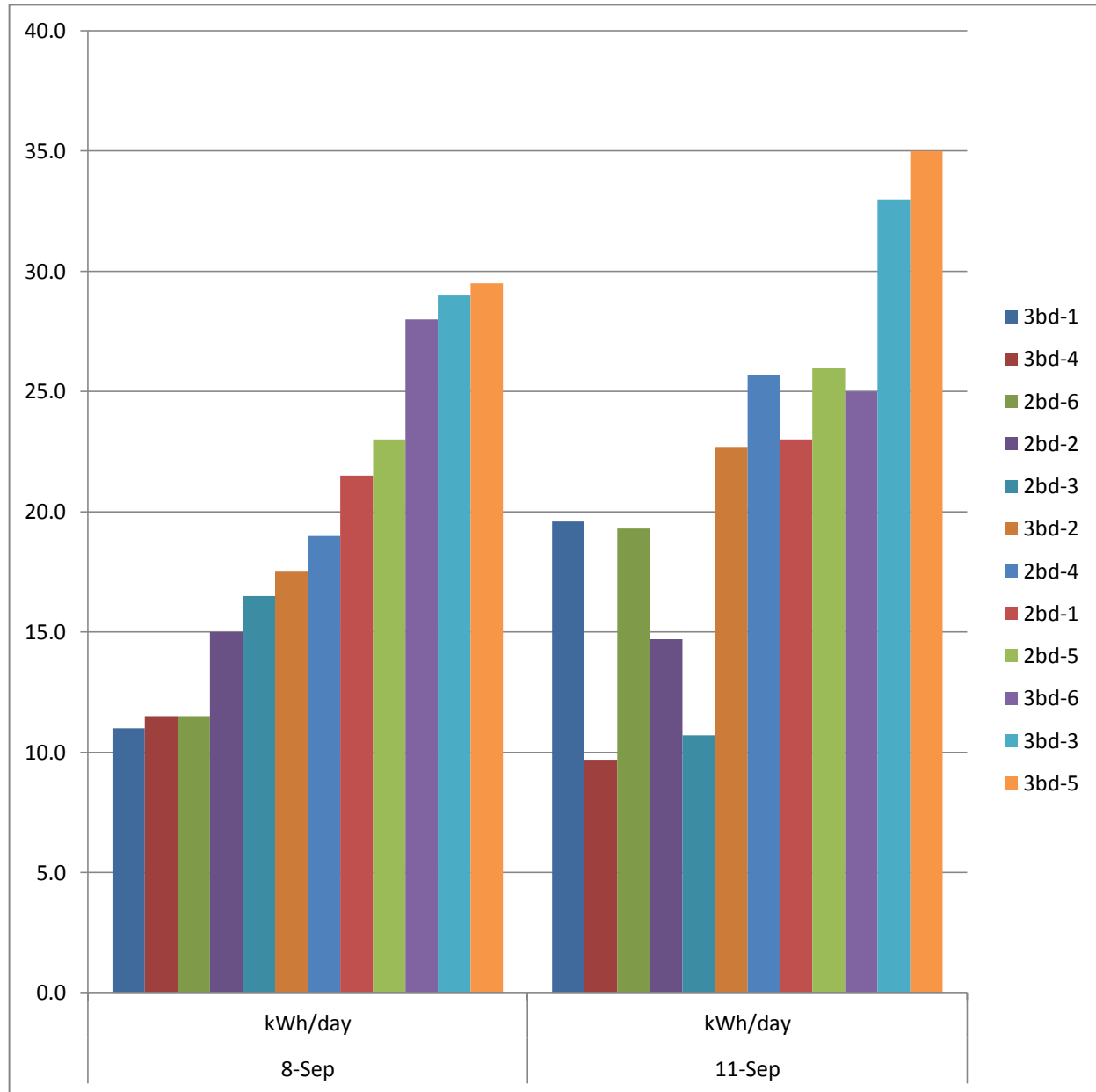
		2-Nov	7-Nov	15-Nov
		23 days	5 days	8.2 days
6393PL	3bd-5	23.4	29.6	29.1
6397PL	3bd-6	17.0	19.6	21.0
6379PL	3bd-3	17.7	41.8	20.2
6395PL	2bd-5	25.1	8.4	25.5
6391PL	2bd-4	18.5	25.8	26.8
6380PL	2bd-1	14.9	20.6	19.1
6399PL	2bd-6	15.0	23.8	17.6
6389PL	3bd-4	7.7	8.2	11.1
6381PL	2bd-3	10.5	15.8	14.4
6378PL	3bd-2	23.9	47.8	42.1
6376PL	3bd-1	18.0	23.8	22.2
6382PL	2bd-2	17.3	30.2	21.7



Notes: Sep.8-11=high temps, 11-18=cooler weather, 18-28=some NO HVAC days but more humid, Sep.28-10 Oct.= colder weather some heat required Oct.10-Nov.2 cool to Sandy, colder after, power out 8hrs on 10/29, cold 11/6+ election day, colder 11/12-15 with overnight frost

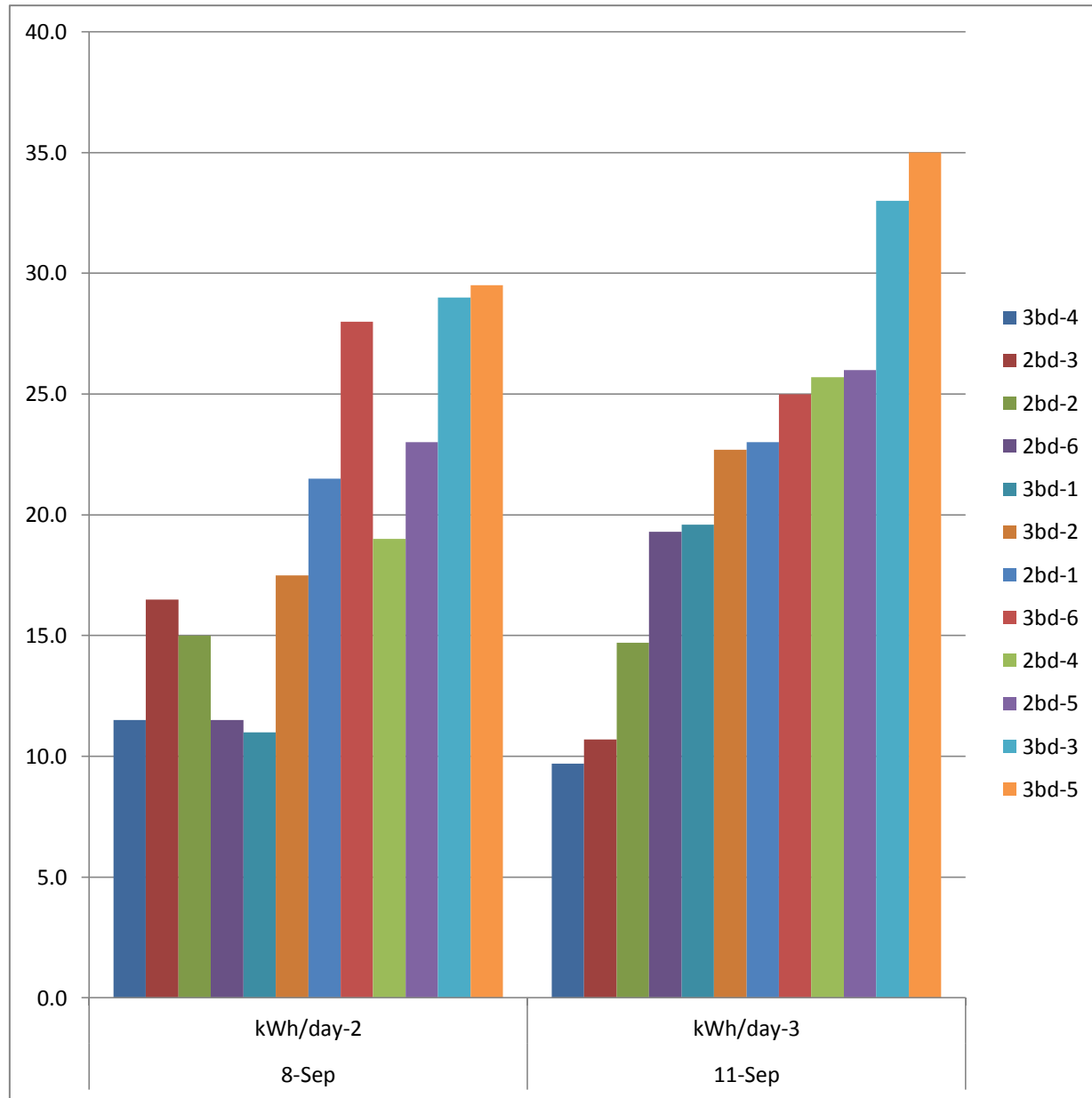
Unit	Code	8-Sep kWh/day	11-Sep kWh/day
6376PL	3bd-1	11.0	19.6
6389PL	3bd-4	11.5	9.7
6399PL	2bd-6	11.5	19.3
6382PL	2bd-2	15.0	14.7
6381PL	2bd-3	16.5	10.7
6378PL	3bd-2	17.5	22.7
6391PL	2bd-4	19.0	25.7
6380PL	2bd-1	21.5	23.0
6395PL	2bd-5	23.0	26.0
6397PL	3bd-6	28.0	25.0
6379PL	3bd-3	29.0	33.0
6393PL	3bd-5	29.5	35.0

NO longer maintained



Unit	Code	8-Sep kWh/day-2	11-Sep h/day-3
6389PL	3bd-4	11.5	9.7
6381PL	2bd-3	16.5	10.7
6382PL	2bd-2	15.0	14.7
6399PL	2bd-6	11.5	19.3
6376PL	3bd-1	11.0	19.6
6378PL	3bd-2	17.5	22.7
6380PL	2bd-1	21.5	23.0
6397PL	3bd-6	28.0	25.0
6391PL	2bd-4	19.0	25.7
6395PL	2bd-5	23.0	26.0
6379PL	3bd-3	29.0	33.0
6393PL	3bd-5	29.5	35.0

NO longer maintained



Unit	Code	8-Sep kWh/day-2	11-Sep kWh/day-3	% drop(-) / increase
6381PL	2bd-3	16.5	10.7	-35.0%
6389PL	3bd-4	11.5	9.7	-15.7%
6397PL	3bd-6	28.0	25.0	-10.7%
6382PL	2bd-2	15.0	14.7	-0.2%
6380PL	2bd-1	21.5	23.0	7.0%
6395PL	2bd-5	23.0	26.0	13.0%
6379PL	3bd-3	29.0	33.0	14.0%
6393PL	3bd-5	29.5	35.0	18.6%
6378PL	3bd-2	17.5	22.7	29.7%
6391PL	2bd-4	19.0	25.7	35.3%
6399PL	2bd-6	11.5	19.3	67.8%
6376PL	3bd-1	11.0	19.6	78.2%

NO longer maintained

